

4. A film, sheet or coating according to claim 1, wherein the fringes have a hollow diameter ratio, which is ratio of the diameter of the hollow center at half height and the diameter at the bottom of the fringe, of 1 or lower, as determined by optical surface profilometry.

5. A film, sheet or coating according to claim 1, wherein the fringes have a Hollowness Index, which is calculated by multiplying the hollow depth ratio with the hollow diameter ratio, of 100 or lower, as determined by optical surface profilometry.

6. The film, sheet or coating according to claim 1, wherein the fringes have an aspect ratio, which is the ratio of the fringe height and the fringe diameter, of between 1 and 5.

7. The film, sheet, or coating according to claim 1, wherein the thermoplastic material is cured, irradiated or cross-linked.

8. The film, sheet, or coating according to claim 1, wherein the layer displays a surface microstructure on both sides.

9. The film, sheet, or coating according to claim 1, which is a mono-layer film, sheet or coating.

10. The film, sheet, or coating according to claim 1, which is a multi-layer film, sheet or coating.

11. The film, sheet, or coating according to claim 10, wherein the surface microstructure is on an outer layer.

12. The film, sheet, or coating according to claim 1 which is a multi-layer film, sheet or coating, wherein the surface-structured layer is an interlayer.

13. The film, sheet or coating according to claim 10, wherein at least one of the outer layers is a fringed layer and at least one of the inner layers is an oriented film, preferably a biaxially oriented polypropylene film.

112 14. The film, sheet or coating according to claim 13, wherein at least one of the layers is a foamed layer.

15. The film, sheet, or coating according to claim 1, wherein at least one layer is elastic.

16. The film, sheet, or coating according to claim 1, which is oriented.

17. The film, sheet, or coating according to claim 1, wherein at least one layer is vapor permeable and liquid impermeable.

18. The film, sheet, or coating according to claim 1 which is printed or imprinted.

19. The film, sheet or coating according to claim 1 wherein the surface microstructure has been subjected to a post treatment step selected from the group consisting of treatment with an abrading device, corona treatment, curing, irradiation and crosslinking.

20. A composite comprising a mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and characterized by fringes, said fringes being characterized in that they are non-perforated crater-like peaks which are at least partially hollow with at least about 25 percent of the volume at the top of the peak being empty and have a height of at least about 40 microns or more, in a density of 1000 or more per square centimeter.

21. The composite according to claim 20 which is a laminate.

22. An article of manufacture comprising a mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and characterized by fringes, said fringes being characterized in that they are non-perforated crater-like peaks which are at least partially hollow with at least about 25 percent of the volume at the top of the peak being empty and have a height of at least about 40 microns or more, in a density of 1000 or more per square centimeter.

23. The article of manufacture according to claim 22, which is a glove.

24. The article of manufacture according to claim 22, which is a hygienic product.

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25. (Amended) The article of manufacture according to claim 22, which is a medicinal collection bag[, preferably an ostomy bag].

26. The article of manufacture according to claim 22, which is a floor or wall covering product.

27. The article of manufacture according to claim 22 which has a soft, textile-like touch.

28. The article of manufacture according to claim 22 which is water repellant.

29. The article article of manufacture according to claim 28 which has anti-skid properties.

30. The article of manufacture according to claim 22 which has enhanced carrying, capturing or storing properties.

31. The article of manufacture according to claim 22 which is heat resistant.

32. A process for making the mono-layer or multi-layer film, sheet, or coating according to claim 1, said process comprising

- forming a precursor film, sheet, or coating with a surface characterized by a pattern of peaks and valleys in a continuous compression molding process, and
- subjecting said precursor to mechanical treatment comprising the application of a tractive force which is applied during release of the film, sheet or coating from a matrix surface under conditions allowing the formation of a fringed surface microstructure.

33. The process according to claim 32, wherein application of the tractive force comprises peeling the film, sheet, or coating off the matrix surface at a temperature which is at or below the Vicat softening point of the thermoplastic material and at a release angle of between 20 and 170 degrees relative to the matrix surface.

34. The process according to claim 32, wherein the precursor is a foam.

35. Use of the film, sheet or coating according to claim 1 to make an article of manufacture having a soft, textile-like touch.

36. Use of the film, sheet or coating according to claim 1 in automotive applications.

37. Use of the film, sheet or coating according to claim 1 to make an article which is water repellent.

38. Use of the film, sheet or coating according to claim 1 for packaging.

39. Use of the film, sheet or coating according to claim 1 in an article with enhanced carrying, capturing or storing properties.

40. Use of the film, sheet or coating according to claim 1 to make an article which has anti-skid properties.

41. Use of the film, sheet or coating according to claim 1 to make an article which has enhanced heat resistance.

42. Use of the film, sheet or coating according to claim 1 to make an article which has a matte surface appearance.

43. Use of the film, sheet or coating according to claim 1 as a filtration medium.